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6 SEM TDC DSE BOT (CBCS) 4 (H)

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(May/June)

BOTANY

(Discipline Specific Elective)

(For Honours)

Paper : DSE-4

(**Biostatistics**)

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. (a) Choose the correct answer of the following : 1×3=3
- (i) To find median, we need to get
- (1) only frequency
 - (2) maximum frequency
 - (3) cumulative frequency

(2)

(ii) Which is a non-random sampling?

- (1) Systematic sampling
- (2) Purposive sampling
- (3) Cluster sampling

(iii) A kite diagram of statistics is used in

- (1) genetics
- (2) taxonomy
- (3) ecology

(b) Answer the following : $1 \times 2 = 2$

(i) Which test is used to test Mendel's dihybrid ratios?

(ii) Who developed the idea of *t*-test?

2. Write short notes on any *two* of the following : $3 \times 2 = 6$

- (a) Sampling unit
- (b) Scatter diagram
- (c) Frequency distribution

3. Write explanatory notes on any *three* of the following : $5 \times 3 = 15$

- (a) Test of significance
- (b) Coefficient of variations
- (c) Probability sampling and types
- (d) Quartile distance and quartile deviation
- (e) Statistical application in Botany

(3)

4. Write down the differences between any *two* of the following pairs : $5 \times 2 = 10$

- (a) Chi-square test and *t*-test
- (b) Quota sampling and Judgement sampling
- (c) Arithmetic mean and Geometric mean

5. What are central tendencies? Describe mean, median and mode mentioning their merits and demerits. $1 + 6 = 7$

Or

What are the graphical representations of data? Describe any three with necessary diagrams. $1 + 6 = 7$

6. Define different measures of dispersions. Find out the standard deviation of the data given below : $3 + 7 = 10$

| Class interval | Frequency |
|----------------|-----------|
| 0-5 | 4 |
| 5-10 | 6 |
| 10-15 | 8 |
| 15-20 | 5 |
| 20-25 | 2 |

Or

What are different types of correlation? Explain different methods of measurement of correlations. $4 + 6 = 10$
